WORLD ECONOMIC INTEGRATION AND TRANSFORMATION PROCESSES IN THE XXI CENTURY

FUNCTIONING OF FOREIGN OIL COMPANIES IN THE RUSSIAN MARKET UNDER ANTI-RUSSIAN SANCTIONS.

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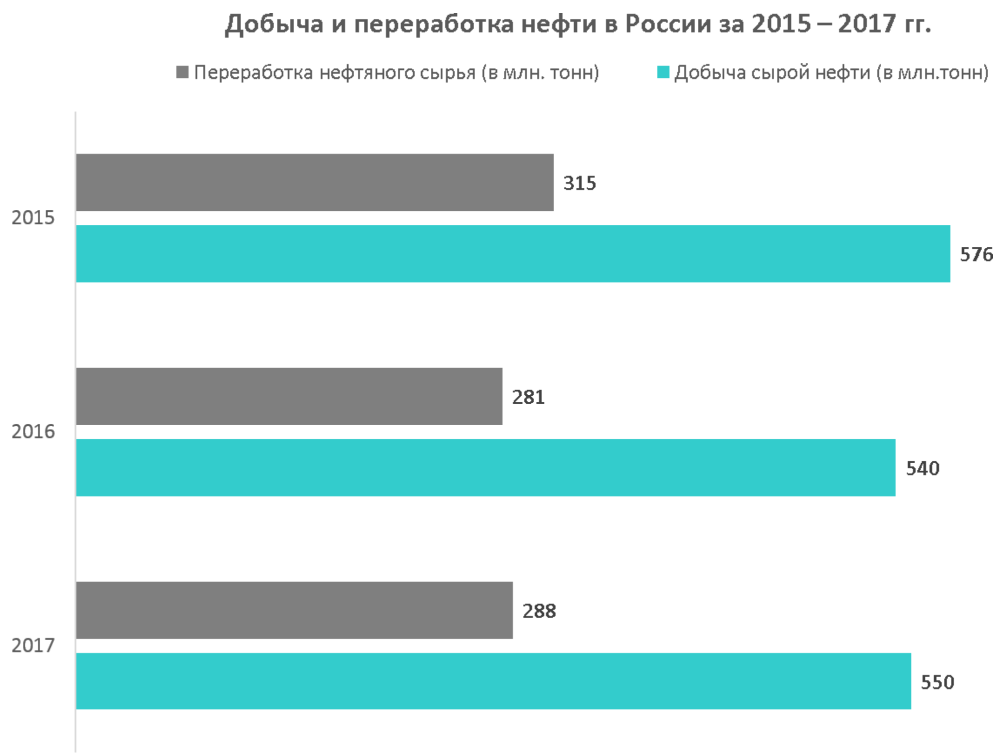
Abstract: in this article, the mechanisms of functioning of foreign oil com- panies on the Russian market during the period of anti-Russian sanctions are con- sidered. The relevance of this topic is due to the mutual interest of the parties. The article reveals the problems of interaction between foreign companies and Russia, as well as a set of measures aimed at overcoming them.

Keywords:sanctions, the oil industry,foreign oil companies, oilfield service companies, mechanism of functioning, investment attractiveness.

Western sanctions, introduced in 2014, were the biggest challenge to the Russian economy in decades. Recall that in connection with the annexation of Crimea, the United States and the EU countries introduced a set of sanctions measures affecting a number of strategic sectors of Russia. In addition to investment and political sanctions, the restrictions affected the defense and fuel and energy sectors of Russia. In particular, goods and technologies for deep-sea and shale production were banned from importing into Russia, and European and American companies were banned from working in the Arctic, as well as supplying equipment for exploration of oil fields [1]. Obviously, this package of measures was intended to restrict oil production in Russia and, thereby, reduce the impact on the world oil market. Three years later, we can state that sanctions. In 2017, Russian oil companies managed to increase production and refining of crude oil and began independent drilling in offshore fields in the Arctic. According to the Ministry of Energy of the Russian Federation, in 2017, Russia managed to extract and process 2% more crude oil than in 2016 [2]. These data allow us to conclude that the sanctions did not lead to a stable decline in oil production. The Russian oil industry is gradually returning to the level of capacity that was registered in the first year after the imposition of sanctions.

Table 1.



Therefore, the main problem considered in this article is not an assessment of the economic effect and an increase in pressure on the oil industry of the Russian Federation, but the formation of a new format of relations between foreign oil companies and the Russian market and their functioning under aggravating sanctions conditions.

The urgency of the problem, or rather, the search for mechanisms for its solution, is due to the presence of mutual interest of the parties. On the one hand, international companies that have invested certain funds in the Russian oil sector expect a return on their investments. Many large oil companies have reduced their presence in the Russian market or completely scaled down their activities under the influence of sanctions imposed by Western countries against Russia. It is noteworthy that another part of large oil companies expressed a desire to circumvent international sanctions by obtaining a special permit to continue their activities in Russia under the terms of agreements already in force, which indicates that there is no the changing attractiveness of the Russian oil market. Many companies have already received such permits from their governments or are working in this direction.

On the other hand, there is the Russian state, which sees in partnership with foreign companies new opportunities for attracting investments and technologies necessary for the development of the industry. It is already becoming clear that heavy oil produced in the developed sources of the Volga region and the Khanty-Mansi Autonomous Okrug contains a large number of impurities that can pollute and gradually disable equipment. The increase in the production and processing of heavy oil requires continuous renewal of the material and technological base of the oil industry, which partly

fell on foreign partners in joint projects.

In addition, the depletion of proven oil reserves is forcing intensive exploration of new deposits, in particular, offshore oil fields in the Arctic. Offshore oil production refers to high-tech methods and requires from Russia a wealth of experience and equipment supplied by foreign oil service companies. After the imposition of sanctions, a number of leading oilfield service companies such as Schlumberger, Haliburton and Baker Hughes began to curtail their activities in the Russian Federation, and the development of their own technologies, according to many experts, may take at least 5 years [3]. In this regard, it can be concluded that the presence of foreign oil companies in the Russian oil market is still a mutually beneficial phenomenon. Nevertheless, the effectiveness of further interaction depends on the revision of the format of the current relations between Russia and foreign business. In order to explore further ways to improve the efficiency of the functioning of foreign oil companies in the Russian market, it is necessary to analyze the motives and specifics of the activities of the companies themselves. Any decision on changes in the scale of activity of foreign companies is made on the basis of an analysis of the external environment and mechanisms of adaptation to the market of the host country. In order for a company to be able to realize its strategic goals, it must take into account the intensity of changes in the external business environment. The external business environment is a set of factors influencing the state of the market, its depth, consumer demand and the rules of activity. The state can directly or indirectly influence market conditions through measures of indirect or direct regulation. These measures are designed to influence certain mechanisms of functioning of a foreign company. A detailed classification of the mechanisms of the company's functioning in the foreign market is shown in Figure 1.

Fig. 1. Mechanisms for the functioning of foreign companies.

An important stage is the development of new mechanisms for the functioning of foreign enterprises in the context of sanctions and a decrease in oil prices, contributing to the effective interaction of all participants in relations. The author suggests some of them for consideration.

In particular, the problem of implementationinformation mechanism can be associated with the

problem of information asymmetry. In such a situation, a scenario is realized in which the investing company and the host country may have different ideas about the market. In such a scenario, there is an overestimation of the indicators of the domestic market by national news agencies. This scenario is critical, since the foreign company associates the analysis of overestimated data with a certain investment expectation. When a company's performance falls below investment expectations, the company leaves the market, spreading a negative reputation for the host country's market.

A similar situation is developing in the Russian oil market. Unfortunately, in the Russian oil industry, there are practically no studies reflecting the alternative of choosing the Russian market, in comparison with other countries. In addition, news agencies do not provide an assessment of individual factors of the investment attractiveness of the industry, such as the technological level of development, human resources, transparency of laws, etc.

The solution to the problem can be the creation of new institutions for the provision of information support services for foreign business. The information provided on the state of the oil market must have a higher quality level and have a transparent calculation and evaluation methodology. It is important that this information is provided in comparison with similar indicators in other countries in order to assess the benefits of choosing the Russian market.

An important component of the conditions for the functioning of foreign oil companies in the Russian market is the tax policy in the oil industry. In order to improve the efficiency of tax policy, from January 1, 2015, amendments to the taxation of the oil industry (called the "tax maneuver") came into force. According to these changes, in the next three years, it is planned to reduce export customs duties on oil by 1.7 times, on oil products - by 1.7–5 times, with a simultaneous increase in the MET rate for oil by 1.7 times and for gas condensate by 6.5 times [4]. In the context of a sharp depreciation of the ruble against major currencies and a simultaneous decrease in the cost of oil, it is necessary to recalculate the expected budget revenues and the tax burden of companies by adjusting the customs duty and the amount of MET. In such conditions, it is doubtful that a large tax maneuver in the oil industry will stimulate the intensification of the development of new fields and more efficient use of existing ones. In order to increase the flexibility and attractiveness of the investment environment of the Russian oil market, it is proposed to use the “tax maneuver” as a mechanism of leverage and incentives. In particular, the estimated value of the MET rate may vary depending on the following factors:

- the amount of oil produced and processed by high-tech methods;
- term of participation in joint projects. When concluding long-term cooperation agreements, the rate may be reduced;
- participation in reforming the current state of the refinery.

Such an approach will allow attracting the missing foreign investments and technologies to the oil industry of Russia, and, for foreign enterprises, this mechanism will become an additional incentive to continue long-term cooperation and search for compromise ways to continue their

activities in Russia, despite international sanctions. - tion.

The third and most important stage in the development of cooperation with foreign companies in the Russian oil industry is the improvement of the organizational mechanism. in order to minimize their losses from the Russian oil business, foreign companies may revise the organizational and legal form of their activities. In particular, according to the Bloomberg news agency with reference to the US Treasury Department, the sanctions do not apply to subsidiaries of foreign companies [5]. For example, Schlumberger, the world's largest oilfield services company, whose headquarters is based in Houston, and Baker Hughes used their operations outside the United States to apply for work in the Russian Arctic. Offshore projects in the Arctic are included in the list of those that appear in the US and European sanctions against the Russian oil industry. Another mutually beneficial form of interaction can be cooperation of foreign oil service and oil producing companies in the form of consortia, licensing franchises. This form can exclude the direct participation of the company in the areas of activity prohibited by sanctions and insure losses associated with the partial and complete curtailment of its activities.

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FINANCE, MONEY AND CREDIT

IMPACT OF EXCHANGE RATE ON MONETARY POLICY

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Abstract. The paper considers the impact of the change in the ruble ex- change rate as one of the target variables in the monetary policy rule. The aim of the work was to establish the adequacy of the policy of the regulator to the rule of monetary policy for the open economy. As intermediate goals, inflation, output, and the exchange rate were analyzed. The model was estimated using a general- ized method of moments. The analysis of empirical results is given.

Key words: monetary policy, Taylor's rule, exchange rate.

Formally, the relationship between short-term interest rates, economic growth and inflation can be displayed using the so-called Taylor rule [8]. Knowing to what extent the actions of the central bank reach the response of economic agents allows making better decisions reflecting the actual efficiency of economic processes [1, 6]. Monetary policy in our country, in addition to the two main targets - inflation and GDP, also depends on the behavior of the exchange rate. Therefore, the change in the ruble exchange rate is considered one of the target variables in the monetary policy rule [3-5]. This situation is considered to be inherent in countries with a high level of economic openness, i.e. countries with a large share of exports and a large share of imports in consumption [2].

This paper examines whether the modified Taylor rule for an open economy is an effective tool for the monetary policy of the Bank of Russia.

The work uses monthly data of the Russian economy from 01.2003 to 06.2015, taken from the website of Rosstat and the Bank of Russia.

All variables were transformed into incremental ones in relation to the same value of the indicator a year ago. Indicators of monetary aggregates, real output, industrial production, effective exchange rates were used in logarithmic form.

As targetedFor the values of inflation and monetary base variables, the official forecasts were used, which are published annually by the Bank of Russia in the “Main Directions of Monetary Policy”. In order to obtain targeting values of the output of both industry and basic sectors of the economy, as well as the exchange rate, a transformation using the Hodrick – Prescott filter was used.

The rate on direct REPO operations was adopted as instruments of the Bank of Russia. Possible independent variables influencing the policy of the regulator were inflation, output and exchange rate.

For a practical assessment, the classical Taylor rule, taking into account the proposals of Clarida et al [7], can be represented as follows:

$$rt = (1 - \rho)\ \delta + \alpha\ (\pi E_{t+k} - \pi *) + \beta\ (xE_{t,q} - x *) + \rho rt - 1 + \varepsilon t, \quad (1)$$

Where rt is the nominal interest rate realized in period t, πE_{t+k}, $xE_{t,q}$ - expected values of inflation and output; $\pi *$, $x *$ - target values of inflation and output for the regulator; α> 0, β> 0, δ> 0 are constant weight coefficients; ρ is the smoothing parameter, 0 <ρ <1.

In addition, for open economies, there is a variation of Taylor's rule, in which considers the exchange rate as an additional target variable. With exchange rate included:

$$rt = (1 - \rho)\ \delta + \alpha\ (\pi E_{t+k} - \pi *) + \beta\ (xE_{t,q} - x *) + \varphi\ (rmE_{t,q} - rm *) + \rho r_{t-1} + \varepsilon_t, \quad (2)$$

where $(rmE_{t,q} - rm *)$ is the difference between the expected and the target value exchange rate.

The equations were evaluated using the Generalized Method of Moments (GMM). When assessing using the GMM method, the instrumental variables were lags (from 1 to 7) of various variables: target variables - inflation, repo rate, monetary base; intermediate goals of monetary policy - the release in the form of indicators of industry and basic industries, exchange rate, inflation difference and inflation target values, monetary aggregates, BRENT oil prices, interest rates, FRS index.

Table 1 shows the indicators characterizing the assessment of the monetary policy also for the instrument in the form of the repo rate, but with the addition of the exchange rate, ie. for an open economy according to equation (2).

Table 1. Results of assessing monetary policy for an open economy with the addition of an intermediate target in the form of the exchange rate. Author's calculations.

Dependent variable REPO	smoothing coefficient ent	free member equal nenia	coefficient for inflation tions	coefficient at high launch	coefficient at exchange course	Determination coefficient	J-statistics
the value of the coefficient citizen	0.847	3.565	0.224	-0.278	17,468	0.849	8,134
t-stat-stick	41,449	6.022	3.212	-2.379	2.503		
The critical value of χ2 is 19.67 at a significance level of 5%.							
As forecast values for a lag of 12 months for inflation and 1 for output and 12 for the exchange rate							
magnitude coefficient	0.685	4.510	0.170	-0.100	-4.042	0.812	16,827
t-stat-stick	31,516	24,736	8,685	-5.156	-3.725		
The critical value of χ2 is 40.11 at a significance level of 5%.							

Everything the coefficients established are statistically significant. The coefficients for inflation and output are less than one, and those for the exchange rate are larger. The smoothing factor is high - 0.847.

We can say that a variant of the Taylor rule with an additional regress or in the form of an exchange rate. shows the real significance of the exchange rate, and not very high - inflation. These results can also be interpreted as the use of various intermediate targets by the regulator in the period under study: both interest rates and the exchange rate.

On the other hand, during the period being assessed, the Bank of Russia takes more actions to regulate the real exchange rate: coefficients at an exchange rate> 1. It is obvious that during the period under review, the regulator pursued a policy of modified targeting. She suggests that along with the main target - maintaining price stability, the regulator also reacts to exchange rate fluctuations, thereby trying to reduce the impact of exchange rate volatility on economic activity, and correlating the contribution of exchange rate changes to inflation.

The option in the form of forecast values for a lag of 12 months for inflation and 1 for output and 12 for the exchange rate has no particular advantages.

This paper establishes the effectiveness of the regulator's reactions in the period 2003-2015 for an open economy with the inclusion of the exchange rate. The real exchange rate exerted the greatest influence on the Central Bank's actions to manage the interest rate, and only slightly - inflation.

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Abstract

Kazakhstan today is pursuing an active policy in the development of innovative technologies in the energy sector. The consistent implementation of the course towards a "green economy" is, first of all, the implementation of global projects for the development of alternative energy, including solar and wind.

Modern concepttransition to a "green economy", approved by the head of the Republic of Kazakhstan N.A. Nazarbayev, it is planned to increase the share of production of renewable energy sources (RES) to 3% by 2020, which is 15 times higher than this indicator in 2016 [9, p. 2]. The reality of these rates of development is due to the active policy of creating a network of renewable energy facilities. Today, the total capacity of renewable energy sources in Kazakhstan is 252.37 MW (hydroelectric power plants - 122.99; wind power plants - 71.87; solar power plants - 57.16; biogas plant - 0.35). An additional increase in RES capacity of 100 MW will ensure the implementation of a large international project for the construction of a solar power plant in the city of Saran, Karaganda region and similar energy facilities in a number of industrial regions of Kazakhstan [4]. This confirms and argues for the reality of the planned indicators of the growth of renewable energy established by the state program.

An increase in the share of solar and wind energy production will allow an increase in the volume of renewable energy sources. Figure 1 shows the dynamics of the share of RES and solar and wind energy production in the total volume of electricity produced in Kazakhstan in the period from 2012 to 2016.

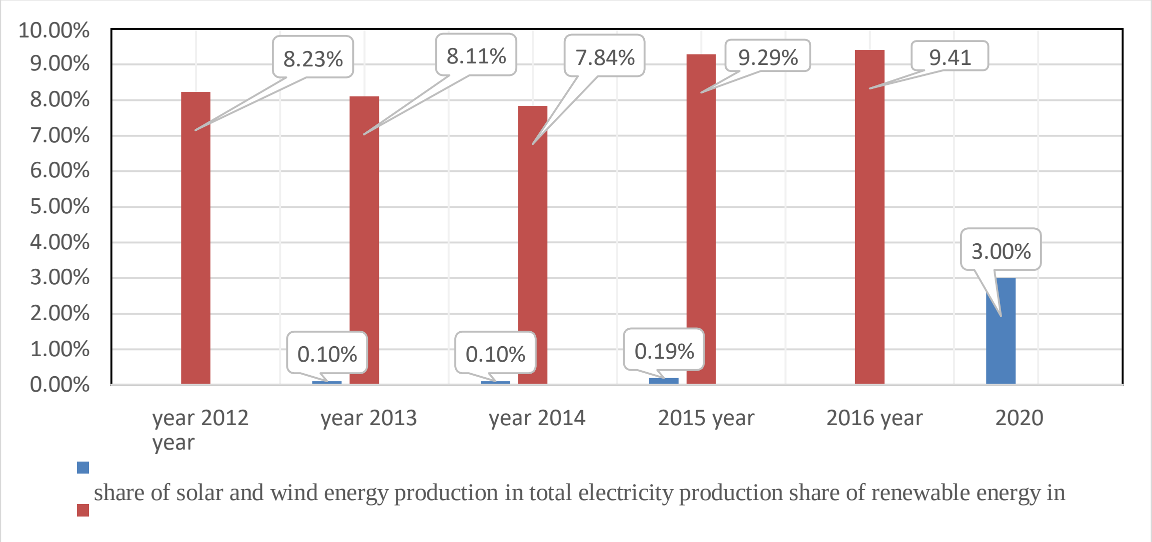

Figure 1 – Share of renewable energy sources in Kazakhstan Source: World energy statistics. Yearbook 2017.https://yearbook.enerdata.ru/wind-solar-share-electricity-production.html

From the dynamics of the level of types of energyRES shown in Figure 1, it is obvious that the growth rate of the share of solar and wind energy in 2016 amounted to 200 percent or doubled compared to 2013. At the same time, in general, the growth rates of renewable energy sources for the same period grew by only 1.2 percent.

But even the high growth rates of solar and wind power production allow Kazakhstan today to take a place in this market segment only in the last ten of the world rating. Despite this, in terms of the share of solar and wind energy in the total volume of its production, Kazakhstan managed to outstrip Russia (0.04%) and Colombia (0.10%). The structure of countries in the last ten of the world ranking in terms of the share of solar and wind energy production in the total electricity production in the country breakdown shown in Figure 2 shows that Kazakhstan in 2016 is inferior to Iran (0.2%), Malaysia (0, 23%) and Algeria (0.34%), but the gap in this indicator is more significant in relation to the countries included in the top ten [10].

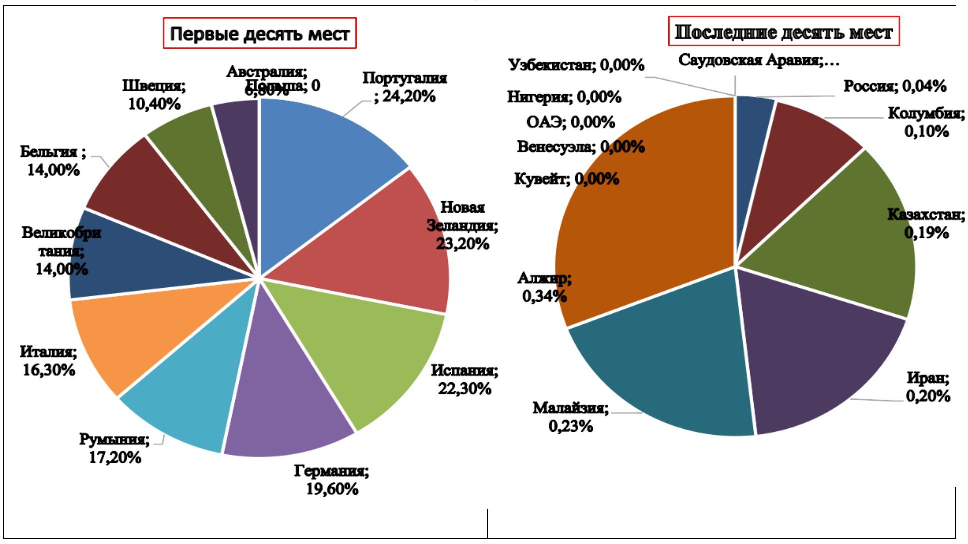

Figure 2 - The first and last ten of the world rankings for solar and wind energy production in 2016

Source: World Energy Statistics. Yearbook 2017.https://yearbook.enerdata.ru/wind-solar-share-electricity-production.html

The structure of countries in terms of the share of solar and wind energy production in its national production volume, which are in the top ten of the world ranking, shown in Figure 2, indicates that 80 percent are European states. In 2016, the level of solar and wind energy production in the total electricity production in Portugal was 24.2%, in Spain 22.3%, in Germany 19.6%, in Romania - 17.2%, in Italy 16.3% ... In terms of the share of solar and wind energy production, European states are significantly ahead of not only Kazakhstan, Russia, Armenia and other states that have become members of the CIS, but also the United States, where in 2016 its level was 5.8%, and China with its level production amounting to 4.1%. Consequently, despite the fact that in 2016 China is the leader in terms of RES production,

If the difference in the share of solar and wind energy production between European countries and the United States and China is dictated by different quantitative parameters of constant growth in the total volume of electricity production in these countries, then the decrease in the total volume of renewable energy sources and the share of solar and wind energy production from 20.7% to 2015 up to 19.6% in 2016 in Germany and in a number of other European countries, became due to changes in weather conditions. The dependence of this electricity production on weather conditions led to the fact that in 2016, on a global scale, the generation of electricity from solar power plants decreased by 3%, and in wind power - by 1.5% [14].

The high level of risks does not reduce interest, but, on the contrary, due to the efficiency and the shortest payback periods of solar and wind energy production, environmental friendliness of its

production, on the contrary, strengthens the active policy of many world powers in the development of this segment of the energy market. This is primarily due to the fact that technologies are being actively developed that work towards creating efficient storage devices that will solve the existing problem of the influence of the weather factor and reduce the risks of solar energy production to a minimum. For example, to date, an efficient Power to Gas technology has already been created, with the help of which, in the production of solar energy, there is already the possibility of rational functioning of the energy system, based exclusively on renewable energy sources. However, the practical use of Power to Gas is limited by the technical capabilities of a number of solar power plants built before its inception. This suggests that the world science is actively pursuing scientific work in the development of modern renewable energy technologies at the industrial level [12].

The development of scientific research in the field of renewable energy sources allows us to solve significant technological problems and ensure a high growth in solar energy production. According to a report by GTM Research, the capacity of solar installations in the world will increase by 85.4 GW by the end of 2017. This volume of growth is 9.4% more than the added capacity in 2016 - 78 GW (according to some estimates, only 71 GW) [2].

In connection with the unevenness of investment activity in the energy state policy in the field of renewable energy in 2017, it is planned to change the structure of the countries leading the world ranking in terms of solar electricity production. As predicted by IHS Markit. IHS Markit is expected to lead the way to India, China, Japan and the United States. According to SolarPower Europe, by 2020 the world will produce a total of 500 GW of solar energy [13].

In October 2016, the construction of the world's largest solar power plant with a capacity of 648 MW was completed in India. Thanks to the commissioning of new solar power plants from 2017, India will generate 4 gigawatts of solar energy annually. And by 2022 this volume is planned to be increased to 100 gigawatts [3].

The further plans of the Ministry of New and Renewable Energy Sources (MNRE) of India include by 2030 to increase the production of renewable energy sources to 40% of the total electricity production. This figure will be achieved through the completion of the construction of 10 large solar sectors, begun in recent years. According to The Indian Express development of 33 solar parks in 21 states of India will double their capacity from 20 gigawatts to 40 gigawatts. This will change the social life of more than 300 million Indians who currently do not have access to the power grid - and this is another factor that forces India to actively develop new energy sources [6].

The peculiarity of the successes in solar energy in China today is that in this region of the world economy there is a practice of creating megacities that mainly consume energy from renewable energy sources. In particular, the volume of electricity consumed in the city of Dezhou (China) in 2016 was 98 percent generated by solar panels [8]. According to the IEA, the total capacity of solar panels installed in China in 2016 exceeded 34 GW. This is almost half of all the additional capacity

produced last year. However, the current production of Chinese solar power plants currently covers only 1% of the total electricity demand.

If the Indian government plans to achieve 40 percent of solar energy production in total electricity production by 2030, then China's long-term development program, calculated until 2050, states that by mid-century the state will receive 86% of the necessary electricity from renewables. [5].

The problems that China faces in the implementation of this program and the generation and transmission of solar energy are that most of the large solar power plants are located in sparsely populated areas in western China, far from industrial and administrative centers such as Beijing or Shanghai [7] ... This requires costs for the distribution and transmission of electricity and, accordingly, leads to an increase in tariffs. As a result, there is an artificial "reduction" of capacities, when some solar power plant is designed for 20 MW, and can find buyers only for 15 MW. In the provinces with the most powerful solar production, the scale of “cuts” is around 30%, and in some cases well above 30%. This is an extraordinary performance and a real problem for China [1].

It follows from this that the increase in capacities for renewable energy should be focused on the scale of the consumer market, taking into account the characteristics of the region, for example, such a parameter as population density. Considering that in Kazakhstan the average population density is slightly more than 6.51 people per km^2 (184th place in the list of countries in terms of population density) [11], and in a number of regions, it is below average, this means that even the construction of large-scale - headquarters solar power plants cannot fully solve the problem of energy supply, as well as in China. In contrast to China, the situation in Kazakhstan is reversed - solar power plants are being built in large industrial centers, and the problem of transferring electricity to sparsely populated areas remains an unsolved problem. However, the Chinese experience in the formation of individual projects, following the example of the introduction of solar batteries in the city of Dezhou (China), can provide additional growth in the production of cheap solar energy and, therefore, will allow Kazakhstan to rise to a higher level of the rating in the world economy and solve numerous socio-economic problems arising from the large territory of the state and low population density.

Thus, despite the problems of the development of solar and wind power generation associated with the global financial crisis, technological problems that carry high commercial risks caused by weather factors, as well as problems caused by the loss of efficiency from - for the requirements of large investments for the modernization of previously created solar and wind power plants, the production of renewable energy is gaining momentum. The prospect of the production of this type of electricity actualizes the directions of the state policy of Kazakhstan in this area and makes the outlined plans real, allowing it to take its rightful place in this segment of the world renewable energy market in the near future.

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COMPARATIVE CHARACTERISTICS OF INDICATORS OF GAUZ "DGKB" CITY OF ORENBURG

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Abstract. In the article the comparison of morbidity, differences of structures, mortal-ity GAUZ "DGKB" the city of Orenburg with averages in the Orenburg region and Russia.

Keywords: morbidity, mortality, access to medical care, children, medical aid, medical services.

According to article 7 of the Federal Law of the Russian Federation N 323-f3 dated November 21, 2011 "On the basics of protecting the health of citizens in the Russian Federation" "The state recognizes the protection of children's health as one of the most important and necessary conditions for the physical and mental development of children. Children regardlessheir family and social well-being are subject to special protection, including care for their health and appropriate legal protection in the field of health protection, and have priority rights in the provision of medical care ". The development of state measures for the protection of children's health is impossible without medical statistics, including monitoring of demographic indicators, morbidity and disability in the child population [1].

Purpose of the study: to study the health of the child population in the period from 2012 to 2015. on the basis of the data presented by GAUZ "Children's City Clinical Hospital" (DGKB) in Orenburg on the state of health of children.

GAUZ "DGKB" in Orenburg is one of the city's leading hospitals providing medical services to children. As of January 1, 2015 the number of attached population aged 0 to 14 years was 39588 people out of 364765 in the Orenburg region or 11% [2]. The absolute majority of the attached population lives in urban areas.

Comparative analysis, it should be noted that the level of morbidity in the child population aged 0 to 14 years, registered in GAUZ "DGKB" in Orenburg, in 2015 compared to the previous year significantly exceeded the average for the region - 2.27 times (3661 ‰ versus 1612 ‰), and almost twice the average child morbidity in Russia in 2014. (3661 ‰ versus 1835 ‰) (Figure 1) [3].

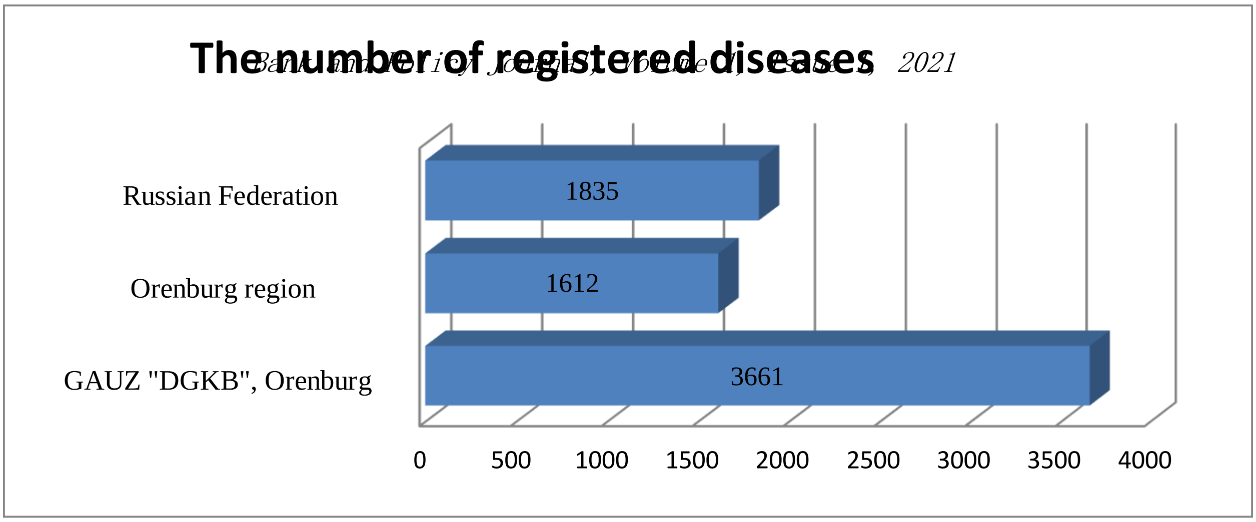

Figure 1 – Number of registered data

Despite the significant excess of registered cases, one should not look for the reasons for the high morbidity of children by examining many factors, but one should talk about a well-functioning medical institution as a highly effective economic entity, and the distortion of some statistical data due to low availability aid, especially in rural areas and small towns [4].

The a priori analysis allows us to single out a number of factors that, in our opinion, have an impact on the high level of registered childhood morbidity in GAUZ “DGKB” in Orenburg:

1 The economic component. In the current realities, the well-being of a medical institution is closely related to the number of registered diseases and the number of services provided. For each diagnosis made, for each service rendered, the organization receives monetary compensation, and the more of them, the, accordingly, the better the financial condition of the medical institution.

2 Provision of doctors. Despite the comparable figures for the provision of the children's population with doctors: 48.3% oo for GAUZ “DGKB” in Orenburg (2015), 46.9% oo for the Orenburg region (2015) and 45.9% oo for Russia (2014). GAUZ “DGKB” in Orenburg has the best opportunities for diagnosing and treating various groups of diseases, unlike most rural and some urban medical organizations, due to the presence of different, including narrowly specialized, doctors.

3 Availability of a medical facility. GAUZ "DGKB" in Orenburg has 4 polyclinics and covers the entire city. It is convenient for the population to seek medical assistance. It is no secret that many residents of Russia by no means in all cases have the opportunity to apply, if necessary, for medical help, especially if the institution is far from the place of residence [5].

4 Apply information technology. In GAUZ DGKB since 2002. the information and

analytical complex “Antibiotic +” was introduced and is successfully operating. The medical information and analytical system “Antibiotic +” was developed jointly with expert doctors and taking into account the specifics of the specialization of the treatment processes of each department.

Foreign experience shows that the socio-economic effect of the introduction and use of ICT in the health sector is very significant. For example, according to studies carried out in the United States, the introduction of electronic medical records (“health passports”) can reduce the order of laboratory and X-ray examinations by 9.14 times; reduce additional research costs by up to 8%; to reduce the number of hospitalizations, which cost an average of $ 16,000 each, by about 2%; reduce excess drug intake by 11%; the full-scale introduction of medical information technologies in the country can lead to savings of up to $ 77 billion per year [6].

5 Close cooperation with Orenburg State Medical University (ORGMU). On the basis of the hospital, many studies are carried out, including statistical ones, various laws numbers, tendencies, forecasts are made and, based on the data obtained, the further development of the medical institution is planned and corrected.

6 Development and implementation of scientific approaches to the management of a medical institution. The staff includes specialists engaged in the development of scientific methods, such as AK Ekimov. with works on the development of strategic thinking of the leader and the application of the process method in medical institutions.

Respiratory diseases (46.2%) accounted for the largest share of the groups of childhood diseases in the GAUZ “DGKB” in Orenburg in 2015, while in the Orenburg region and Russia, this indicator is significantly higher, and amounted to 63.4%, respectively. 65.2%. In second place are diseases of the nervous system (11.32%), in third - diseases of the eye and its adnexa (6.51%).

The structure of childhood morbidityin GAUZ "DGKB" in Orenburg in 2015 is shown in Figure 2.

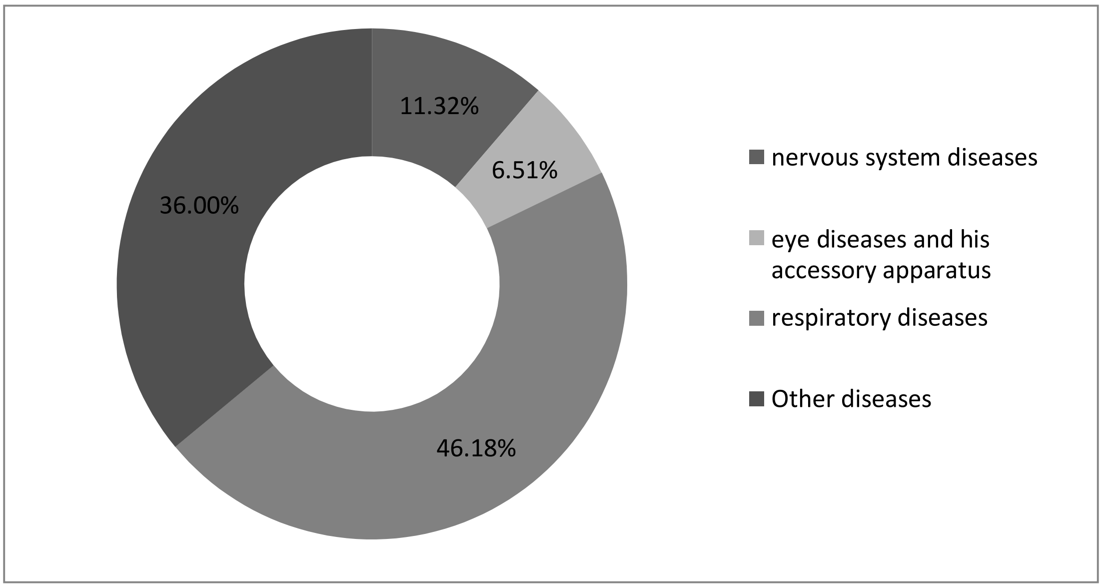

Figure 2 – The structure of children's morbidity of GAUZ "DGKB" in Orenburg in 2015

The calculated integral indicators of the structure of Gatev, Salai and Ryabtsev of the incidence of the child population by groups of diseases, according to the assessment of the difference between these groups in the GAUZ "DGKB" of Orenburg in 2015 with the assessment for the Orenburg region for 2015. and in Russia for 2014, showed a significant level of differences.

Child mortality is one of the leading indicators characterizing the health status of the population. It is a kind of barometer, an "indicator" of the levels of socio-economic development of the country, material and sanitary well-being of the people, the state of medical care for the population, especially children and mothers, and the effectiveness of preventive and sanitary-anti-epidemiological measures [7].

After analyzing the indicators of infant mortality as of January 1, 2015. for GAUZ "DGKB" in Orenburg, Orenburg region, Russia, it can be concluded that the hospital has achieved a very high result in this aspect, almost 3 times reducing the average indicators for the Orenburg region and Russia (Figure 3) ...

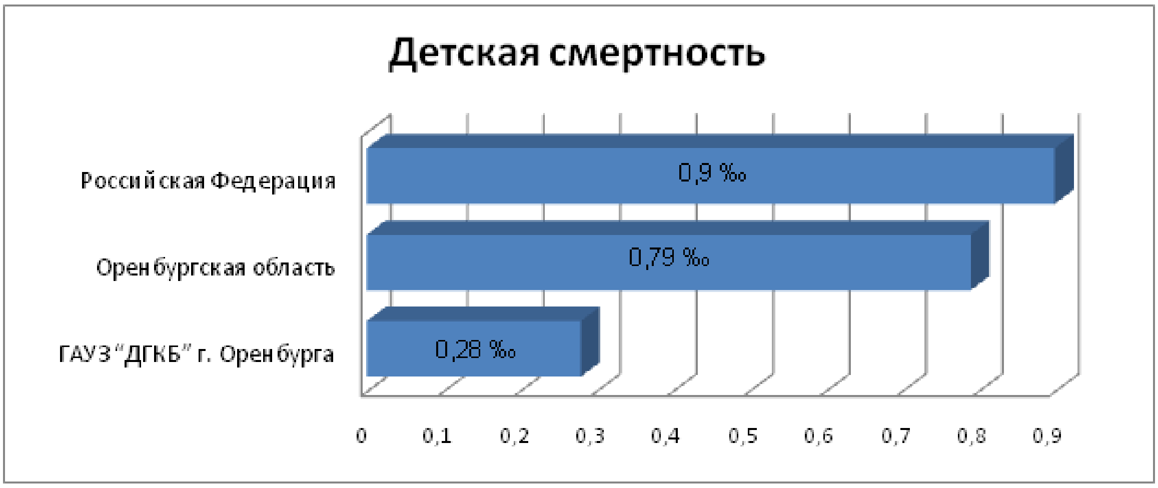

Figure 3 – Child mortality

Thus, duringComparing various indicators, it was found that GAUZ "DGKB" in Orenburg functions at a fairly high level, a large number of diseases are detected. The structure of child morbidity at GAUZ "DGKB" in Orenburg has a significant level of differences with the structure of child morbidity in Russia and the Orenburg region. Child mortality is significantly lower than the average for Russia and the Orenburg region.

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WAYS TO INCREASE THE EFFICIENCY OF INVESTMENT IN THE NUCLEAR INDUSTRY REPUBLIC OF KAZAKHSTAN

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In the Strategy "Kazakhstan-2050", the Head of State N. Nazarbayev emphasized that thanks to a responsible policy in promoting the nuclear non-proliferation regime, Kazakhstan is rightfully recognized as the leader of the non-proliferation regime, a model for other states [1] and today Kazakhstan is actively developing peaceful use atomic energy.

The nuclear industry in Kazakhstan includes the nuclear industry, nuclear energy, and the scientific and technical sphere. In 2014, in his address, the President of the country, with one thesis, emphasized the importance of the entire industry. After the preconditions: "The need for cheap nuclear energy in the foreseeable future of the world's development will only grow. Kazakhstan is the world leader in uranium mining ", followed by a clear and unambiguous conclusion:" We must develop our own production of fuel for nuclear power plants and build nuclear power plants "[2].

The nuclear industry of Kazakhstan is so far represented only in several stages of the world nuclear fuel cycle (NFC): capacities for the extraction of natural uranium, reconversion of low-enriched uranium into components of nuclear fuel (powders and fuel pellets of uranium dioxide) and equity participation in a Russian enterprise for separation of uranium isotopes (enrichment).

Today Kazakhstan is the world leader in the extraction of natural uranium. In 2009, Kazakhstan came out on top in uranium mining in the world and continues to maintain a leading position in the global natural uranium market. About 41% of the world production of natural uranium is mined in Kazakhstan [3]. In 2014, the volume of uranium mining in comparison with 2009 increased by 66%. In terms of the volume of explored uranium reserves, Kazakhstan ranks second in the world. According to the IAEA, about 12% or about 875 thousand tons of uranium from all explored world reserves of uranium are concentrated in the bowels of Kazakhstan [4]. The unique method of field development using the in-situ leaching (ISL) method allows the fields of Kazakhstan to compete in terms of production costs with the rich in content fields of Canada and Australia. The development of deposits by the method of borehole underground leaching, in comparison with traditional mining methods, significantly reduces the harm caused to the environment, completely eliminates any sources of dust release and reduces the release of radioactive substances into the atmosphere by tens of times [5].

More than 80% of uranium reserves and resources of the Republic of Kazakhstan are

concentrated in deposits that are suitable for development by the PSV method. The main mining enterprises of the nuclear industry are located in the Kyzylorda and South Kazakhstan regions, where the main explored reserves and uranium ore provinces of Kazakhstan are located.

Today, 12 companies are involved in uranium mining, of which 10 companies were created in the form of joint ventures with companies from Russia, China, France, Canada, Japan and Kyrgyzstan. Currently, all uranium mined in Kazakhstan is exported to the world market, primarily to China, Europe, South Korea, and the United States.

In the Strategic Development Plan of the Republic of Kazakhstan until 2020, one of the strategic goals in the energy sector is the creation of a vertically integrated company with a nuclear fuel cycle by 2020 [6].

At present, a project on uranium enrichment is being successfully implemented with the Russian side on the basis of the world's largest Russian uranium enrichment enterprise, the Ural Electrochemical Plant. Since 2014, the joint Kazakh-Russian enterprise CJSC Uranium Enrichment Center has access to Russian uranium enrichment services in the amount of 5 million SWU (separation work unit) per year [7].

The implementation of the project to organize the production of nuclear fuel on the territory of the Republic of Kazakhstan will not only attract investments in the industry, but also provide an opportunity to master promising technologies of the nuclear industry.

Thus, in 2014, NAC Kazatomprom JSC and the Chinese General Nuclear Power Corporation (CGNPC) began to develop cooperation in organizing joint production of nuclear fuel for Chinese nuclear power plants in Kazakhstan. expanding and deepening mutually beneficial cooperation in the field of nuclear energy.

NAC Kazatomprom JSC signed an agreement with the China General Nuclear Power Corporation on expanding and deepening mutually beneficial cooperation in the field of nuclear energy during the official visit of the Premier of the State Council of the PRC to Kazakhstan 14 December 2014 in Astana. The agreement provides for the development of strategic cooperation in the development of uranium resources, production of nuclear fuel, peaceful use of atomic energy, and transit transportation of uranium products through the territory of China and Kazakhstan [8].

Within the framework of the Agreement, it is planned to create a joint venture for the production of nuclear fuel on the basis of Ulba Metallurgical Plant JSC for the needs of Chinese nuclear power plants. At the first stage, the production of fuel assemblies will amount to 200 tons in terms of enriched uranium with a further expansion of production for the Chinese market and third countries.

When organizing the production of nuclear fuel on the territory of Kazakhstan, modern nuclear technologies will be used, which are possessed only by countries that are among the most technically developed countries. This will significantly increase the status of Kazakhstan in the world nuclear community.

In order to close the cycle and develop high-tech redistribution in the nuclear industry, the Republic of Kazakhstan already has significant advantages: the availability of a resource base and a backlog in technologies and capacities (Ulba Metallurgical Plant). At the same time, there are significant limitations to be overcome, such as a shortage of qualified personnel.

Since 1997, on the basis of the RSE "National Nuclear Center of the Republic of Kazakhstan" (hereinafter - "NNC RK") and the RSE "Institute of Nuclear Physics" (hereinafter -

"INP") there are several branches of the departments of technical physics and nuclear power plants. Branches provide communication between university departments (general physics, technology and physics of low temperatures, engineering technology, applied mathematics and informatics, chemistry, biology, ecology) and departments of reactor research, reactor materials science, automation of reactor research, electrophysical, technological installations, reactor complexes "Baikal" and IGR, VVR-K [9].

In 2006, at the Astana branch of the Institute of Nuclear Physics at the Eurasian National University named after L.N. Gumilyov, the Interdisciplinary Research Complex was created as a regional center for natural sciences and scientific and technical support for the training of specialists for the nuclear industry of Kazakhstan.

International departments of nuclear profile have been created at the Eurasian National University. L.N. Gumilyov and Kazakh National University. al-Farabi, training at which will allow students to receive education in leading international scientific centers and universities.

As part of the partnership between the Japan Atomic Energy Agency (JAEA), the National Nuclear Center and KazNU named after alpha Rabi signed a trilateral memorandum on the development of human resources in the atomic field. Since 2010, experts and teachers have been trained with the participation of JAEA, JAPC, ROTOBO and Japanese universities in specialties related to nuclear reactor engineering, safety, environmental monitoring and emergency response systems.

The role of the IAEA in the training of national personnel for the nuclear industry of the IAEA member countries should be especially noted. Thus, in Kazakhstan, with the assistance of the Committee for Atomic and Energy Supervision and Control of the Ministry of Energy of the Republic of Kazakhstan, hundreds of specialists from leading enterprises of Kazakhstan associated with the nuclear industry, such as JSC NAC Kazatomprom, RSE

"NNC RK", RSE "INP", medical institutions, etc.

Thus, the nuclear industry in the Republic of Kazakhstan should become one of the factors ensuring an increase in the country's export potential through the production of high-tech uranium products, creating conditions for the industrial development of the country through the development and implementation of science-intensive nuclear technologies, the development of related branches of science and production, and for increasing the professional and personnel potential of the country.

The main achievement in the development of the raw material base and the creation of technologies for the production of rare and rare earth metals in 2016 was the creation of a joint pilot production of collective concentrates of rare earth metals between NAC Kazatomprom JSC (51%) and Sumimoto Corporation (49%) based on the SARECO plant in Stepnogorsk. The plant is a unique complex of thermal and hydrometallurgical processing of various types of raw materials.

The company is expanding the production of materials and devices for renewable energy. Thus, in 2012, a plant for the production of photovoltaic modules was launched in Astana, allowing the production of 230 thousand modules of 230 and 270 W each, and a plant for the production of photovoltaic plates and cells in Ust-Kamenogorsk was prepared for launch. Currently, contracts have already been signed with AREVA for the supply of finished products. In addition, in 2012, an enterprise for the production of metallurgical silicon was resumed in Kazakhstan.

NAC Kazatomprom JSC pays great attention to the development of scientific, technical and innovation potential, annually increasing the volume of R&D expenditures. So, in 2016, R&D costs amounted to 3.315 million tenge, exceeding the indicator of 2015 by almost 3 times. Research and development work touched upon such areas as: improving the technologies of geological exploration, increasing the efficiency of obtaining chemical uranium concentrates and the production of sulfuric acid, as well as the creation of production of wind turbines and heat pump units.

The company is an active investor in the development of the regions of its presence and provides social assistance to various groups of the population on an ongoing basis. In 2016, NAC Kazatomprom JSC was recognized as the best philanthropist in the Investment in the Future nomination.

Despite the difficulties that NAC Kazatomprom JSC faced in 2016, the Company showed good results and achieved the set goals within the framework of strategic priorities. In the future, the Company will continue to implement its ambitious strategy aimed at increasing shareholder value.

According to the results of the study, it can be concluded that investment activity in the South Kazakhstan region is still far from optimal, but there are enough positive shifts and the mining industry of the region is developing dynamically.

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ANALYSIS OF SUSTAINABLE DEVELOPMENT CONCEPTS INTEGRATED PRODUCTION COMPLEXES IN THE OIL INDUSTRY

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Abstract the category of sustainable development. Considered important concepts for the development of oil producing complex. Describes the features and principles of sustainable development integrated oil and gas complexes. Selected directions of increase of stability of the Russian and Chinese companies.

Key words: integrated, sustainable development, marginal fields, hydrocarbon raw materials.

Methodological issues of ensuring sustainable development of industrial enterprises, industrial complexes and business processes have been the subject of scientific discussions since the 50s of the last century. It should be noted that despite the generally accepted concept of sustainability - as “the ability of a system to maintain its current state under the influence of external influences”, there are more than 50 different definitions of this economic category.

The presence of many interpretations reflects not only the multidimensionality of the category of sustainability, which characterizes the economic, social and environmental priorities of the development of society, but also the difference in the approaches used by different social strata - scientific, entrepreneurial, political.

So, at the macroeconomic level, the concept of sustainable development is considered as a transition of society to a new quality (co-evolution of nature and man within the “noosphere”), business circles see this concept as an opportunity to work without socio-political upheavals and revolutions.

At the level of production structures (enterprises, complexes and production units), various aspects of sustainability are distinguished, including socio-economic, financial and economic, technical and technological, supply and marketing, and environmental.

Analysis of the above works allows us to conclude that the stability of the oil and gas complex

should be considered as the ability for a certain time to maintain "… integral performance indicators within acceptable limits even if external conditions do not allow current activities to be economically efficient ". In this case, stability is understood not as stability, as the absence of profound changes, but as the reliability and efficiency of the system, ie. achieving its "optimality".

Formation of methodological approaches and principles of sustainable development of integrated oil and gas production complexes should provide for mandatory accounting of production and economic features of their functioning. These include the following:

1. The peculiarities of the subject of labor in the oil and gas complex are the resources of hydrocarbons in the bowels. At the same time, until the moment of oil (natural gas) production, the subject of labor is represented not by physical parameters that can be determined and measured, but by information about predicted, industrial, prepared for the development of reserves of raw materials, that is, information characterized by a high degree of uncertainty.

2. The end results of labor, as well as the efficiency of their production, are characterized by a strong dependence on uncontrollable geological, mining and other natural-economic and environmental factors, which requires the development of special risk management programs subsoil use including the development and implementation of special technologies and organizational schemes for geological exploration and field development.

3. High investment and operational risks of oil and gas projects implementation. At the same time, the decision of the issue of starting prospecting and exploration work and the subsequent development of the identified field in the oil and gas complex corresponds to the decision of the issue of investing the initial capital for acquiring a license, conducting prospecting work at the site and subsequent investments for perhaps - offshore works and field development. Capital investments at each of the above stages of development are uneven and increase with each subsequent stage of work.

4. The economic uncertainty of the results of the sale of oil (natural gas) to consumers, determined by the risks of supply and demand, as well as the risks associated with the disharmony of supply and demand. At the same time, the Risk associated with the supply of mineral raw materials is that the mining enterprise is not able to effectively and quickly respond to changes in demand. The risk of demand for mineral raw materials is closely related to the global economic environment.

5. Sluggishness and long duration of the production cycle from the start of work to the receipt of the first commercial product. Due to the inertia, the oil production enterprise, even with a significant decrease in prices, continues to produce and release raw materials on the market. This causes a significant disharmony between supply and demand and leads to a crisis in production. In this case, prices can fall below the level that is objectively formed under the influence of demand.

6. Special regulatory conditions for the functioning of subjects of economic law in the oil and gas complex. Oil and gas companies, in addition to complying with the legislative acts of economic law, are obliged to comply with the requirements of subsoil legislation, including the Subsoil Law,

legislation on licensing of subsoil use, as well as the protection of subsoil and the environment.

Taking into account the above provisions, the MMN oil production complex can be defined as an integrated system of companies carrying out production and commercial activities for the production, transportation and refining of oil on the resource base of marginal fields. The oil production complex MMN as a system can be characterized by the following features:

1. Integrity and segmentation of the main production and economic elements of the complex. relationship relationships - the presence of significant stable relationships;

2. The presence of specific development goals, internal organization and business structure that make up the basis of the oil production complex of MMN.

3. The presence of the integration qualities of the system, i.e. the presence of the oil-producing complex MMN qualities that are inherent in the system as a whole, but not inherent in individual elements.

4. Adaptability - the presence of systemic qualities of adaptation to the influence of factors of the external macroeconomic environment in the oil-producing complex of the MMN.

With regard to the concept of sustainable development of an oil production complex for the development of marginal oil fields, the system of the specified composition requirements remains unchanged. However, the nature of the requirements for sustainable development is changing towards their tightening.

Structurally, the MMN oil production complex should provide for a number of functional components that ensure the implementation of the main and auxiliary business processes.

The schematic diagram of the MMN oil production complex is shown in the diagram (Fig. 1).

Rice. 1 Schematic diagram of the formation of the oil production complex MMN

The basis of this MMN complex is a technological block

Upstream. The institutional structure of this block includes companies (NIR), the main production cycle of subsoil use: preparation of industrial reserves - oil production - transportation of products. This includes the actual oil producing companies, geological exploration organizations and oil transportation companies. At the same time, the composition of the business processes of exploration companies includes:

1. Conducting regional geological studies based on the results of which the identification of reserves (resources) of categories D1, C3 is carried out.
2. Preparation of promising oil-bearing structures for setting up exploratory drilling based on the results of which the identification of reserves (resources) of C3, C2 categories is carried out.
3. Prospecting and appraisal work, based on the results of which the discovery of deposits is carried out, which corresponds to the identification of reserves C2, C1 and partially B.
4. Exploration and additional exploration of deposits in the course of their operation, which corresponds to the identification of reserves C1, B and partly A.

The products of geological exploration organizations (prepared reserves of industrial categories) are the subject of labor of oil producing companies performing a cycle of work related to the design, construction of field facilities, construction of a complex of production and injection wells, organization of oil production, its preparation and transportation to the systems of connection to main oil pipelines (or other places of shipment).

A special place in the Upstream complex is occupied by oil transportation companies that implement business processes for the construction and operation of midstream oil pipelines.

Complex deliveries of the necessary production complexes, equipment and software are carried out by service technology companies (TC) that implement the Downstream cycle.

It is necessary to highlight the fundamental feature of the sustainable functioning of the production unit "Upstream". It is connected with the fact that the results of work on each of the sequentially performed processes have a significant impact on the stability of subsequent processes. For example, mistakes at the stage of preparation of commercial reserves can lead to significant losses in the organization of oil production and even make the project for the development of the oil field unprofitable.

Thus, the sustainable development of the oil production complex of MMN should provide for the balanced and sustainable development of its main elements, including: reproduction of the mineral resource base and licensing activities; development of oil production centers, production infrastructure and transport; outstripping innovative development of technologies for preparation of reserves, production, logistics of oil and gas raw materials, compensating for the objective tendencies

of worsening conditions for the development of hydrocarbon resources.

In accordance with the selected features, it is possible to determine the systemic principles of sustainable development of the oil-producing complex of marginal fields:

- sustainable development as a principle of the organization of this complex, which determines the structure and nature of industrial relations both within the complex and in its interaction with adjacent industry structures;
- sustainable development as a program capable of ensuring continuous movement from the current state to a higher quality state;
- sustainable development as a process of changing technological, organizational and economic parameters of production activities.
- sustainable development as a way of organizing the elements of an oil-producing complex into a single whole and the impact of the processes of functioning of the system as a whole on its individual links.

For oil companies, the choice of a license for the exploration and development of marginal oil and gas fields is essentially a strategic choice from various strategies to increase the stability of the portfolio of assets represented by hydrocarbon resources. The choice of a strategic direction for the development of a company whose assets include fields containing marginal oil reserves presupposes the implementation of a certain sequence of interrelated steps.

The first of these is an assessment of possible limitations associated with geological exploration and industrial development of marginal oil fields. By their nature, these restrictions are quite volatile. Some of them can be quantified (investments, increase in reserves, etc.), while others are quite problematic to subject to quantitative accounting (geography of the location of marginal assets, geological features of their structure, etc.).

At the next step, a system of scenarios is described in which possible options for the development of the company are displayed (for example: pessimistic, basic, optimistic). In this case, the order of implementation of the company's investment projects is determined by their profitability and profitability of development. Further, it is necessary to make a reasonable choice of one of the proposed scenarios.

At the final step, the selected alternatives are reviewed in a strategic aspect, since large projects requiring significant investments and having an increased risk are subject to particularly thorough analysis.